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ABSTRACT

Thirty years ago a cashless society was predicted for the near future; paper currency and checks would be an antiquated symbol of the past. Consumers would embrace a new alternative for making payments: electronic money. But currency is still used for 87% of payments, mainly for "nickel and dime" purchases. And checks are the payment choice for about 10% of transactions each year. However, the percentage of transactions done electronically is growing dramatically. This growth is made possible by electronic funds transfer (EFT) systems, which move funds in and out of accounts using electronic impulses. This booklet discusses the different types of EFT systems and looks at the future of electronic money. The booklet contains the following sections: "ATM and POS Systems"; "Direct Payment"; "Stored-Value and Smart Cards"; "Home Banking"; "Consumer Resistance"; "Consumer Acceptance"; and "What Does the Future Offer?" Contains a glossary and a list of additional readings. Included with the booklet is a teaching guide that contains content questions and answers. (BT)

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ED 456 073

# Electronic Money

- What is EFT and what are its advantages?
- How can consumers use electronic money?
- Why is electronic banking growing?
- Is electronic banking safe?

SO 032 472

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*Electronic Money* is one of a series of essays adapted from articles in *On Reserve*, a newsletter for economic educators published by the Federal Reserve Bank of Chicago. The original article was written by Keith Feiler. The revision was prepared by Tim Schilling.

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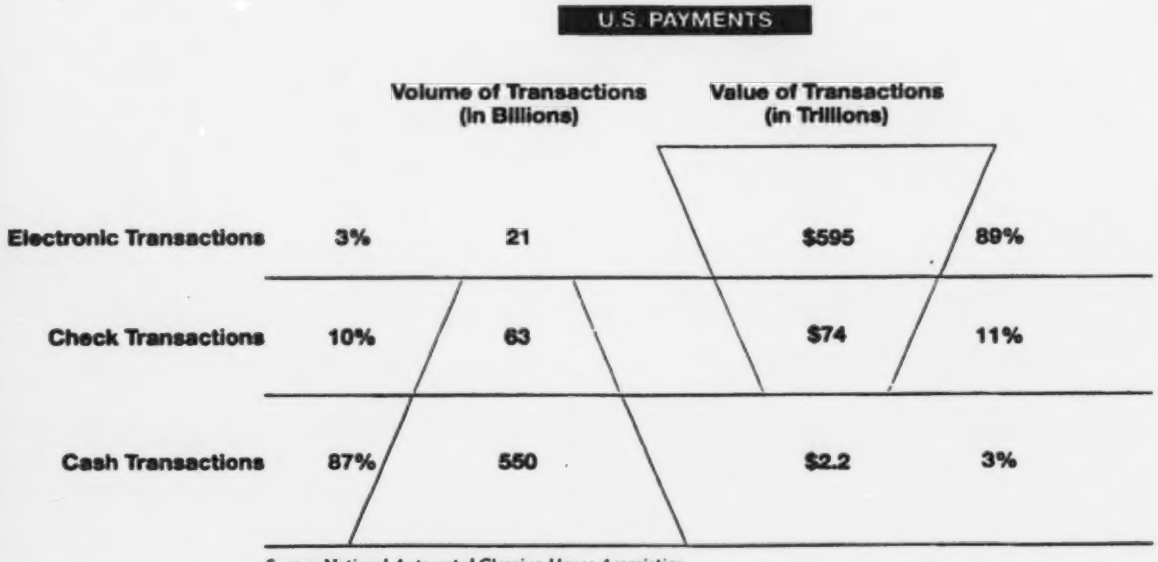
Thirty years ago, some predicted we were on the verge of a cashless society. Paper currency and checks would join the Edsel and the black-and-white television as antiquated symbols of the past. Consumers would embrace a new alternative for making payments: electronic money. As it turned out, consumers were reluctant to give up on currency and checks.

In recent years, however, consumers seem to be changing their minds. Cash and checks are still widely used. Currency is used for 87 percent of payments, mainly for "nickel and dime" purchases. And checks are the payment choice for about ten percent of transactions each year. But the percentage of transactions done electronically is growing dramatically. The important role of electronic payments can be seen by looking at the *value* of payment transactions. Electronic payments account for nearly 90 percent of the dollar value of transactions.

This growth is made possible by electronic funds transfer (EFT) systems, which move funds in and out of accounts using electronic impulses. EFT systems range from the now-familiar automated teller machines (ATM) to "virtual banking" on the Internet. This booklet discusses the different types of EFT systems and looks at the future of electronic money.




*Source: National Automated Clearing House Association*

## ATM and POS Systems

The most common form of EFT technology is the ATM, which enables us to make deposits, obtain cash, and transfer funds between accounts. Many ATMs also can be used to pay bills and loans and complete other transactions. ATMs are activated by inserting a special access card into a machine. A consumer must enter a personal identification number (PIN) before any account or transaction information appears on the screen. When the transaction is completed, the consumer receives a receipt showing the date, the dollar amount and the type of transaction.

A variation of this system is point-of-sale (POS). With POS, consumers use an access card (sometimes an ATM card) or debit card to transfer funds immediately from their account to a merchant's account. For this reason, a POS transaction is different from a credit card transaction in which payment is postponed.

To use POS online, a consumer simply passes a debit card through the terminal to transfer the funds. It is usually also necessary to punch in the proper PIN. The consumer receives a printed receipt after the transaction is completed.

Some POS transactions are "offline." With an offline transaction, the consumer does not usually have to enter a PIN number, and the sales charge is submitted by the retailer along with charge slips. The amount of the transaction is deducted by the consumer's bank when the sales slip is received and appears on the consumer's bank statement rather than as a charge on a credit card statement. Offline POS transactions may also require the customer's signature on a slip that resembles a charge slip.

### Make Guessing Your Pin Like Finding a Needle in a Haystack

Some basic rules for effectively using your four-digit Personal Identification Number (PIN):

1. The PIN should be kept secret to prevent fraud. It should be known only to the owner (or joint owners) of the card. Never tell your PIN to anyone else.
2. The PIN should be easy to remember but avoid numbers such as birth dates, Social Security numbers, addresses, or phone numbers. Those numbers are easily guessed or gathered from other sources of information such as checkbooks, driver's licenses, or social security cards.
3. The PIN should be memorized and never written on the ATM card or anything kept with or near the card.
4. The PIN should never be given over the phone. Likewise, don't include it in mail orders.

During the 1990s, the number of POS outlets has increased dramatically to include such retail outlets as grocery stores, convenience stores, and even movie theaters. In fact, most places that take a major credit card will take a POS access card that carries the proper logo.

POS is a useful payment alternative because it allows an immediate transfer of funds between the buyer and seller. The seller does not have to worry about a bounced check. For the buyer, POS can be more convenient than writing a check, and is safer than carrying cash.

The federal government is planning to take increased advantage of ATM and POS technology through electronic benefits transfer (EBT) programs. These programs allow state and federal agencies to disburse benefits payments through an ATM, POS, or similar system. Among the most common EBT programs are food stamp programs. However, other payments in the near future also may be distributed through variations of ATM or POS technology.

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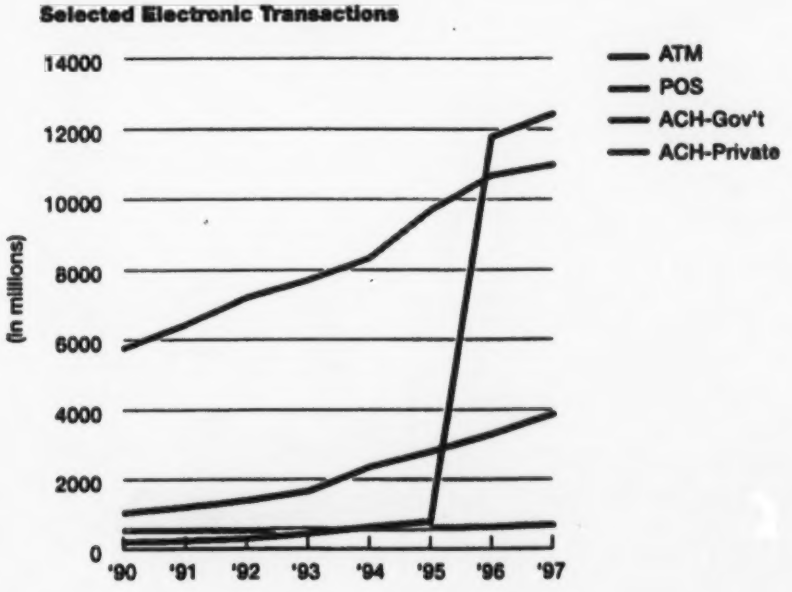
*The level of electronic payments and electronic banking has grown considerably during the 1990s. One area of significant growth is POS, which increased dramatically in the mid-1990s as retailers began installing and using POS technology. In a single year, the level of POS transactions grew by a factor of twelve.*



## Direct Payment

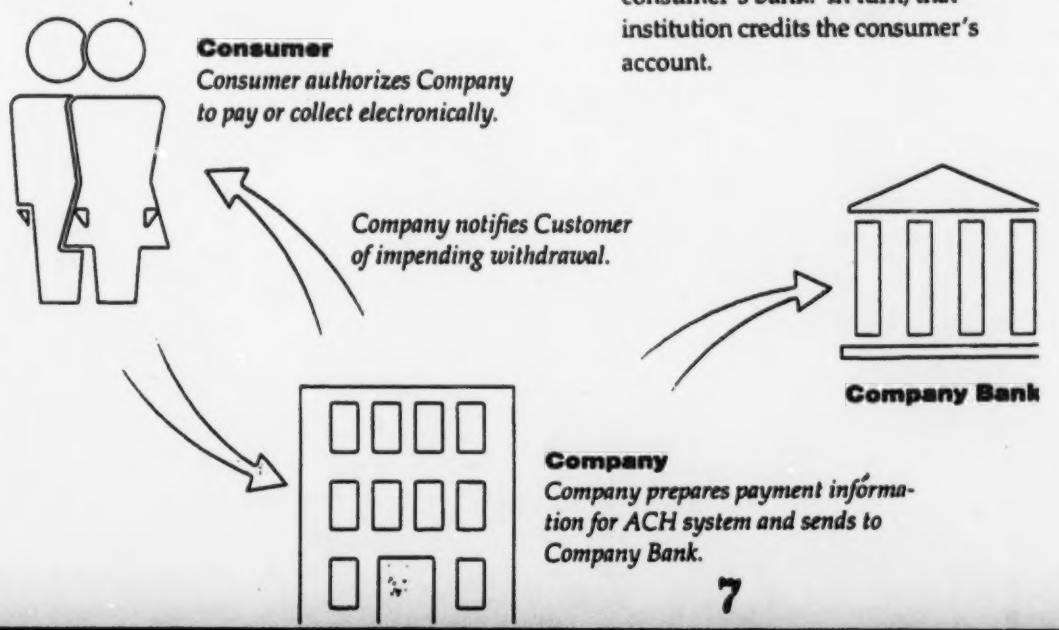
Another form of electronic banking is direct deposit and preauthorized payments or electronic bill payment. Both are usually cleared through the Automated Clearing Houses (ACH) located at the Federal Reserve Banks and their branches. These payment methods are two sides of the same coin. Direct deposits are automated credits or increases to the consumer's account. Preauthorized bill payments are automated debits or reductions. Unlike ATM and POS transactions, no access card is needed.

Direct deposits are increasingly used by employers, government agencies and other organizations that make regular payments, such as wages and dividends, to individuals. According to 1996 figures from the National Automated Clearing House Association (NACHA), about 60 percent of U.S. households receive their wages via direct deposit.

The U.S. government is the largest single user of direct deposit. More than 95 percent of government workers use direct deposit. And many of the government's benefits are paid electronically. The Social Security Administration alone uses direct deposit to make payments to approximately five million recipients every month. The number of benefit payments made electronically will soon increase because of the Electronic Funds Transfer Act or "EFT '99." This Act will help the federal government make most of its payments electronically. (See sidebar on next page.)

It is easy to receive funds by direct deposit. A consumer first must authorize the deposit. The party making the payments, usually an employer, then creates an electronic message. This message specifies the amount of payment and identifies the financial institution and account to be credited. This data is transmitted to the ACH, which collects and sorts the information. The Clearing House then transmits the account and payment information to the consumer's bank. In turn, that institution credits the consumer's account.

## How Direct Payments Work


Consumer
Consumer authorizes Company to pay or collect electronically.
Company notifies Customer of impending withdrawal.
Company Bank
Company
Company prepares payment information for ACH system and sends to Company Bank.

In a preauthorized bill payment arrangement, a consumer authorizes a creditor to deduct funds for automatic payment of bills.

The consumer first signs a form authorizing the payment. This form indicates when payments are to be made, the dollar amount, and the account from which the funds will be paid. This form is then sent to the creditor, who makes arrangements with the consumer's bank.

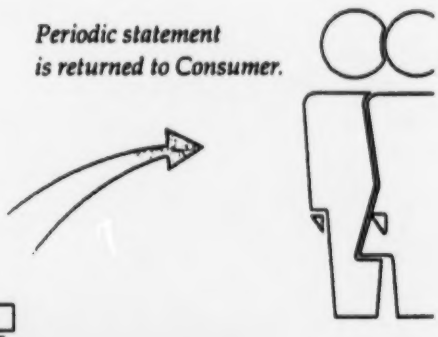
Prior to each payment, the firm will send a notification of payment to the consumer, usually a week or two before the payment is to be made. This notification is itemized just like a regular bill. The consumer can check the charges and contact the creditor if there is an error. If the consumer wishes, he or she can stop the electronic payment by notifying the creditor and the bank.

## EFT '99

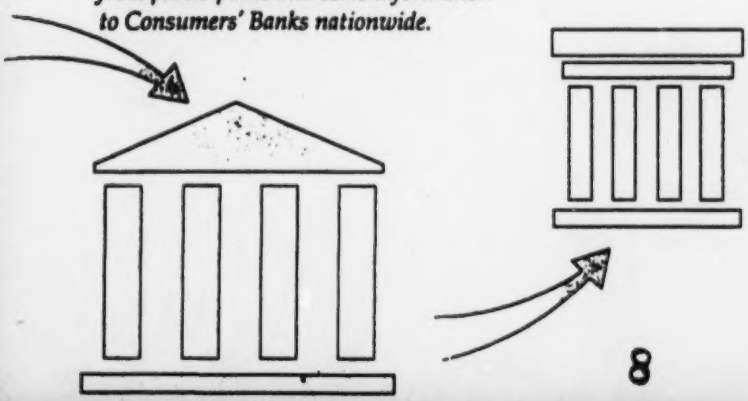
*EFT '99 refers to legislation requiring that most federal payments, such as social security payments, be made electronically by January 2, 1999. The legislation gave the U.S. Treasury the power to grant waivers to those who would find it difficult to switch to electronics. In June 1998, the Treasury announced it would grant waivers to consumers if a switch to electronics involved a hardship. In other words, consumers receiving government benefits can choose whether those payments are electronically deposited into their accounts or sent as a paper check. Those who do not sign up for direct deposit will continue receiving paper checks. They also may be required to file a written waiver, depending on the federal agencies involved. However, social security recipients will not have to file a waiver.*

*Many people receiving federal payments are already paid electronically, but it's estimated that more than 10 million don't have a bank account. This includes the elderly, homeless, poor, recent immigrants and others in special circumstances. These groups will receive an automatic waiver from the EFT requirement until accounts can be made available to them at a "reasonable cost." When that happens, those payment recipients will have the option of choosing direct deposit or continuing to receive a paper check.*

*Periodic statement is returned to Consumer.*



**Federal Reserve ACH Department**
*ACH accepts payment information from participants and sorts information to Consumers' Banks nationwide.*

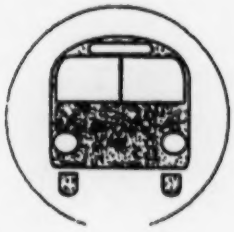


**Consumer Bank**
*Each Consumer Bank receives ACH items daily, which are posted to Consumers' accounts.*

Electronic bill payment is most commonly used for recurring payments such as mortgage or rent, utility bills, loans, and insurance premiums.

Electronic bill payment has not been as popular as direct deposit. A Federal Reserve study found that approximately 37 percent of households were using electronic bill payments in 1998. Only 13 percent of billers offered an electronic alternative for their customers. Nevertheless, electronic bill payment is growing in popularity. One study found that the number of such payments increased by 150 percent from 1996 to 1997.

The advantage of this method for businesses is its increased efficiency. Electronic transactions cost less to process because there are no paper checks to be transported, handled, or reconciled. The efficiency of electronics can reduce costs for both businesses and the banks that process the transaction. For the consumer, it means faster processing leading to quick and certain payments and receipts. Another advantage for the consumer is not having to worry about paying a bill "too early" or sending the payment "too late."

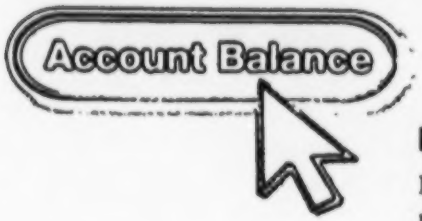


## Stored-value and Smart Cards

Two electronic payment methods that are becoming increasingly popular are stored-value and smart cards. Stored-value cards provide a convenient substitute for cash and checks. The cards contain a magnetic strip that records a dollar balance. The amount is either predetermined or established by the consumer when the card is purchased. The dollar value of each transaction is deducted until the balance reaches zero and the card is discarded.

Most of these cards are referred to as "closed-system" cards. That means the cards can be used only for certain transactions in specific locations. Public transit systems in many large cities use these cards, as do some universities. Consumers can purchase stored-value cards in many locations for use at public telephones. A type of stored-value card is even used on many toll roads and highways to allow cars to quickly pass through toll stations.

Smart cards are similar to stored-value cards, except that they have a computer chip instead of a magnetic strip. The computer chip creates a "rechargeable" card that is more secure and flexible than a stored-value card. The monetary balance is stored on the card's microchip and is accessed through a special reader, which often requires use of a PIN number. When the balance is at zero, a smart card can be "reloaded"

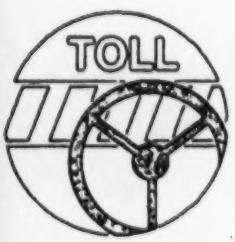



with funds by using an ATM, or even a home computer fitted with a special access device. Another feature of a smart card is its ability to carry additional information about the owner, such as medical and financial data or a "voice-print" for security purposes.

A variation of the smart card is the electronic purse. The purse provides more flexibility because it is an "open-system" card. That means that the card has multiple uses in many different locations. It can be used as a credit card, debit card or a stored-value card, depending upon the owner's preference.

Smart cards are beginning to gain a foothold, although there is room for significant growth. Smart cards are being used in a number of ways. A number of government agencies are using them because of their increased flexibility. The ability to provide background on the card owner makes them helpful on military posts.

Much of the growth in smart cards has taken place in Western Europe. Consumers in the U.S. have been slower to use this payment method. Some estimate that smart cards will increase significantly in the U.S. in the next few years. However, it may be a while before smart-card technology is widely used in the United States.




## Home Banking

Home banking, which encompasses several EFT services, is being offered by more financial institutions, often on the Internet. Banks are using various software packages that help consumers make financial transactions. These home banking systems allow customers to debit or credit their accounts, confirm account balances, or even apply for a loan. Many of them will chart spending, develop personal financial statements and reconcile checking accounts. Consumers can access these services using a touch-tone phone or personal computer equipped with a modem.

The Internet is expected to be a major factor in home banking. The number of people using the Internet is expected to increase dramatically in the next few years, providing a large potential market for home banking. There are even "virtual banks" on the Internet that have no physical offices in the traditional sense. All services are provided through the Internet.

Not many people are using Internet banking thus far—an estimated 1 to 2 percent of households. But home banking should gain in popularity as consumers become familiar with the Internet.

## Consumer Resistance

Electronic money is increasingly popular. Nevertheless, many consumers are reluctant to abandon cash and checks.

Some consumers hesitate to use electronic banking because a canceled check provides proof of payment. This is taught widely in many consumer finance courses. However, checks are not the only proof of payment. The receipt provided by retailers as part of any electronic transaction also performs a similar function.

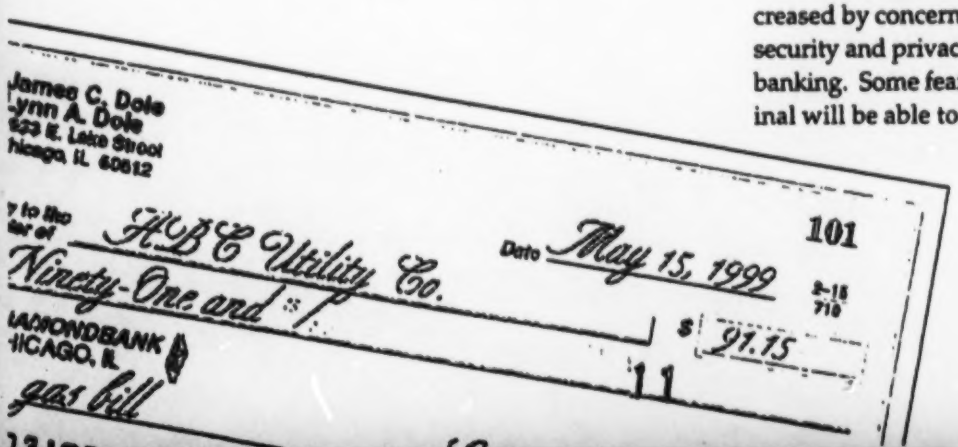
In addition, many financial institutions now offer a service where they will keep an electronic copy of all canceled checks on their computers. This eliminates the need for a consumer to store old checks. In this type of system, an image of the canceled check is often returned with the depositor's bank statement rather than the actual piece of paper. This reduces storage problems for the consumer and handling costs for the financial institution. And if the consumer needs a copy of a canceled check for proof of payment, the bank can provide a valid, legal copy.

Electronic transactions also appear on the regular statements that consumers receive from their banks. Automated deposits and payments and ATM and POS transactions all appear on the statement. It should be checked for accuracy, just as checks are verified. Errors should be brought to the attention of the financial institution, which must work with the consumer to resolve any errors.

Another reason some individuals prefer checks is "float"—the lag between the time a check is received and deposited and the time the funds are actually subtracted from the consumer's account. But float is shrinking. In most cases, once a consumer's check is presented to a bank by a retailer or creditor, the payments are cleared electronically within 24 hours, with the paper check arriving later. In some cases, only a facsimile of the check is actually transferred between the banks involved.

Regardless of float, many people simply like using checks. They feel they have more control over their finances by depositing paychecks and writing personal checks to pay bills. These same people often feel they lose control by using methods such as direct deposit and automated payment.

Their sense of unease is increased by concerns about the security and privacy of electronic banking. Some fear that a criminal will be able to tap into

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telecommunication lines and steal their money. Others worry that a stranger might be able to access personal information. Some simply want to avoid using the technology they increasingly face in day-to-day life, from programmable VCRs to microwave ovens. And some who are comfortable with technology simply have not taken the time to switch to electronic payments. They recognize the advantages of electronic payments but haven't been motivated enough to make a change.

## Consumer Acceptance

While there is continued resistance, many consumers enjoy the benefits of electronic money. The convenience and certainty of electronic payments are attractive to many. And the float that can be an advantage to those paying a bill can turn into a disadvantage for those expecting payment. Nobody likes to be told that "the check is in the mail."

Consumers using automated debt payments don't have to worry about paying additional interest or a late fee because of a late payment. Likewise, consumers with direct deposit don't have to make a special trip to deposit their paycheck in order to keep other payments from "bouncing."

Resistance to electronic money may be diminishing also as consumers become more aware of security features. The initial efforts in this area came when financial institutions began storing information in computers, long before electronic banking was even a dream. Institutions have enhanced the security of all their information by establishing strict procedures requiring special identification to enter computer areas.

Security has also been improved through special audit controls and electronic encryption, which make messages meaningless if they are intercepted by an intruder. PINs provide an additional safety precaution.

Regulations also provide protection for consumers. In 1978, Congress passed the Electronic Funds Transfer Act, directing the Federal Reserve to develop a legal framework for identifying the rights and responsibilities of consumers and financial institutions in the use of EFT. The resulting Federal Reserve Regulation E requires that financial institutions provide:

- written receipts of all transactions;
- procedures for stopping preauthorized payments;
- adequate information concerning what to do about billing errors, unauthorized transfers, and lost or stolen debit cards; and
- limits on the costs that a consumer will incur in the event of an unauthorized deduction.

The Federal Reserve has requested comments from the public on new rules that would extend these protections to newer electronic banking tools. Rules already extend protections to federal electronic payment programs. State electronic benefits transfer programs are allowed to develop their own rules and protections.

Another factor encouraging consumer acceptance is the low cost of processing electronic transfers compared with the higher cost of clearing checks. To a large extent this difference reflects the high cost of physically handling and storing checks as opposed to simply transmitting an electronic impulse. For example, the National Automated Clearing House Association estimates that it is 10 times more expensive to issue and process a paper paycheck than to process a direct deposit payment.

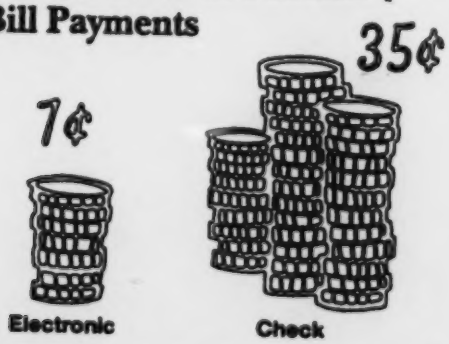
In the past, when most banks offered "free" checking services to consumers, these costs did not directly affect depositors. Now, however, many consumers receive interest on their checking deposits while paying a greater portion of the actual costs of checking. This is often done through service charges, higher minimum balances, or per-check printing fees. As consumers become more aware of the costs of processing and moving paper, the advantages of electronic banking may become more apparent.

However, electronic banking isn't a free service. Electronic banking requires a considerable upfront investment in technology. And there are costs for maintaining and improving electronic banking on an ongoing basis. Consequently, banks may pass on the costs associated with EFT.

For example, consumers may not have to pay a fee for withdrawals from ATMs if the machine is proprietary (owned by the consumer's bank), but there may be a charge if consumers use an ATM maintained by a bank where they are not a customer. Just as with any banking service, consumers should "shop around" for the best deal. They should match the services offered by the financial institution to their needs.

Finally, a factor contributing to consumer acceptance is familiarity. Simply put, as more and more people grow up with or learn about electronic payments, they will feel more "at home" with the idea. The familiarity issue is related to the learning curve of technology. Microwaves and VCRs faced the same obstacle. But as people were introduced to the technology, they began to see advantages. Just as there are people who refuse to use VCRs and microwaves, there may always be some people who are hesitant to use electronic money.

**Relative Cost to Process Bill Payments**




*Source: National Automated Clearing House Association*

## ATM Fees, Convenience Stores, and Petroleum

*Many consumers have become concerned as more financial institutions (and non-financial institutions) have charged a fee for using their ATMs. Most often, these companies will charge only non-customers (people who don't have accounts with the company) for use of the ATM. However, it is not uncommon for these firms to charge a fee for using a "foreign" ATM (one that is not owned by the depositor's bank). Some banks may charge their own customers for use of their machines, but that is not a regular practice.*

*The idea of charging for ATM access is related to the economic concept of utility. A product's or service's utility is its "value," "usefulness," or its ability to "satisfy wants." There are three types of economic utility—form, place, and time. Form utility means the product comes in a form that the consumer finds useful. Place utility and time utility mean the product or service is available where or when the consumer needs it.*

*Oil is often used to explain the different types of utility. Oil in the ground does no one any good. First, it has to be moved to the surface. This is place utility. Second, unrefined petroleum does not work well as a fuel or lubricant. When it is refined, it gains form utility. But it's still not convenient for consumers at the refinery or the well-head. Place utility means having a refined product—such as gasoline—available where consumers can access it. If a gas station is open 24 hours, it has maximum time utility.*

*ATMs gain much of their value because they have place and time utility. They are found in a variety of locations and typically operate at all hours.*

*For most consumers, the main advantage of ATMs is convenience. And that convenience often involves a cost. ATMs provide consumers with access to certain banking services 24 hours a day, seven days a week, at a variety of locations. ATMs can reduce the distance consumers need to travel to do their banking as well as cut the time they spend standing in line to see a teller. Since this extra convenience sometimes involves extra costs, consumers should shop for a bank whose services meet their needs.*

## What Does the Future Offer?

Despite some continuing hesitancy, consumers seem to like the convenience of electronic banking. The widespread use of ATMs has paved the way for greater acceptance of other forms of electronic money such as smart cards and POS. Direct deposit, and to a lesser extent, electronic bill payment, are gaining in popularity. In addition, as more people purchase personal computers and use the Internet, home banking should become more widely accepted.

All of these factors are affecting the payments process. Already the percentage of transaction dollars moving electronically is increasing, indicating that consumers are changing their payment habits. And legislation such as EFT '99 will encourage further growth of electronic payments.

The shift to electronic payments offers clear benefits to society. Processing checks is a labor-intensive, relatively inefficient process. Americans write about 63 billion checks every year. The costs of processing these checks is equal to 1 percent of the U.S. gross domestic product. A shift to electronics would allow this money to be used in more productive ways.

As economic incentives to change intensify, and as we become more familiar with new electronic systems, EFT may eventually equal or even surpass cash or checks as the convenient and accepted means of paying for goods and services. Electronic payments are rapidly gathering momentum. But a cashless or checkless financial system is still not in the foreseeable future.

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## Glossary

***Automated Clearing House (ACH)***
A service used by banks to exchange electronic payments drawn on one another. Total debits and credits (payments and deposits) and itemized accounting of individual items are presented. This reduces transportation expenses and simplifies the transfer of funds between customers' accounts.

***Automated Teller Machine (ATM)***
A machine used for banking services, including withdrawals and deposits, balance inquiries, transfers, and other services. Customers access an ATM by using a plastic card encoded with electromagnetic identification such as an access card or credit card. Transactions are processed electronically with the aid of computer systems.

***Electronic Bill Payment***
A service allowing customers to authorize their bank to make regular transfers for certain expenses (such as mortgage, insurance premiums, utilities, etc.) from their checking or savings account.

***Debit Cards***
Plastic cards encoded with electromagnetic identification. Banks may issue them to customers who meet certain qualifications. Customers can use their card to pay for purchases electronically using point-of-sale terminals. Debit cards are often issued with ATM capability.

***Direct Deposit***
A service provided by many employers, government agencies, and other parties. The party offering the service can transfer funds electronically to the appropriate financial institution, which deposits the funds directly into an individual's account (see ACH and EFT). The customer receives a written notification that the funds were deposited, including the effective date and account number used for the transaction.

***Electronic Benefits Transfer (EBT)***
The transfer of public entitlement payments, such as welfare or food stamps, via direct deposit or point-of-sale technology (see POS). The recipient can be given an identification card, similar to a benefit card, and a PIN number to allow them to access the benefits through an electronic network.

***Electronic Funds Transfer (EFT)***
A generic term describing any transfer of funds between parties or depository institutions via electronic data systems.

***EFT '99***
Part of the Debt Collection Improvement Act of 1996 that mandated that regular federal government payments be made electronically beginning January 2, 1999.

***Electronic Purse***
A specific type of smart-card (see below). A chip in the card provides multiple payment options such as debit, credit, and direct payment from a stored balance. The electronic purse allows for transactions with different merchants in many locations.

***FedWire***
The Federal Reserve System's wire transfer service, used to move large sums of money between depository institutions such as banks, savings & loans, and credit unions.

***Personal Identification Number (PIN)***
A code number used by the customer to authorize transactions using an access card or some other form of electronic funds transfer. The code number may be assigned by the bank or chosen by the customer and is not issued to other parties. The PIN number should be kept secret by the customer.

***Point-of-Sale (POS) Network***
A network of banks, debit cardholders, and merchants that permits a consumer to electronically make direct payment at the place of purchase. The funds transfer directly from the account of the cardholder to the account of the merchant (see Debit Cards).

***Smart Card***
A card-based payment system that stores value for transactions on a computer chip instead of a magnetic stripe. As the card is used for transactions, the amounts are subtracted from a balance on the chip. When the balance approaches zero, the chip can be "reloaded" through a number of methods. These cards are often used in closed-systems for specific types of purchases but do not have to be so restrictive. The chip also allows the owner to keep a variety of information with them at all times.

**Additional Readings**

To order the materials listed below, write or call the Federal Reserve Bank of Chicago's Public Information Center, P.O. Box 834, Chicago, IL 60690, 312-322-5111, or contact the listed address.

*ACHs (Fedpoints 31)*
(Updated 1997, brochure)
Public Affairs Department
Federal Reserve Bank of New York
33 Liberty Street
New York, NY 10045-0001
http://www.ny.frb.org

*The Story of Checks and Electronic Payments*
(1995, 23 pp.)
Public Affairs Department
Federal Reserve Bank of New York
33 Liberty Street
New York, NY 10045-0001
http://www.ny.frb.org

*The Electronic Purse*
*(Current Issues in Economics and Finance,* Volume 1, Number 1, April, 1995, 6 pp.)
Public Affairs Department
Federal Reserve Bank of New York
33 Liberty Street
New York, NY 10045-0001
http://www.ny.frb.org

*Making Payments in Cyberspace*
*(Economic Commentary,* October 1, 1995, 4 pp.)
Public Affairs Department
Federal Reserve Bank of Cleveland
1455 East Sixth Street
Cleveland, OH 44114-2566

**For Educators**

**Lesson Plans on Electronic Banking**

*The Check is not in the Mail*
(*On Reserve* #34, May, 1996, 4 pp.)
Public Affairs Department
Federal Reserve Bank of Chicago
230 South LaSalle
Chicago, IL 60604
http://www.frbchi.org

**Lesson Plan on ATM Fees**

*ATM Fees: Burning the Consumer at Both Ends?*
(*On Reserve* #39, January, 1998, 4 pp.)
Public Affairs Department
Federal Reserve Bank of Chicago
230 South LaSalle
Chicago, IL 60604
http://www.frbchi.org

**Lesson Plan on EFT '99**

*EFT'99*
(*On Reserve* #40, April, 1998, 4 pp.)
Public Affairs Department
Federal Reserve Bank of Chicago
230 South LaSalle
Chicago, IL 60604
http://www.frbchi.org

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# Federal Reserve Bank of Chicago

## Electronic Money

**Classroom Questions for Electronic Money**

- Consumer/Business Education Questions & Activities
- Answers to questions on the cover
- Ordering Information

**Consumer/Business Education**

**Content Questions & Activities**

- What portion of our total transactions are conducted in cash? (page 3)
- What is EFT an abbreviation for? How do EFT systems work? (page 4)
- What is POS an abbreviation for? How do POS systems work? (pages 5-6)
- Are debit cards functionally closer to your credit card or your checkbook? (pages 5-6)

**Application Questions & Activities**

- What were the two principle positions taken on the issue of banking by those charged with designing the Constitution? How was the debate resolved? (page 3)
- What actions brought about the first constitutional test of the nation's central bank? (page 8)
- What phrase or phrases formed the heart of the Supreme Court decision that resolved the first test of the central bank? (page 8)

**Answers to questions on the cover**

- What is EFT and what are its advantages? pages 4 and 11-12
- How can consumers use electronic money? pages 4-9

- Why is electronic banking growing? pages 5-6 and 11-12
- Is electronic banking safe? page 10

**Ordering Information**

Money Matters: The American Experience with Money is available free from the Federal Reserve Bank of Chicago. It can be ordered on-line using our on-line order form, or by contacting our Publications Department at

on-line order form:
http://www.frbchi.org/pubs-speech/publications/print_order_script.html

e-mail: publications.chi@chi.frb.org

mail: Publications Coordinator
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Federal Reserve Bank of Chicago
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230 South LaSalle Street
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